

ZAVEL'SKIY, A. S.

USSR/Acad Sci

Nov/Dec 1947

"Regular Session of Department of Physicomathematical Sciences of  
the Academy of Sciences, USSR" 1/2 p

"Izv Akad Nauk SSSR, SER Fiz" Vol XI, No 6

Papers submitted at the May session by: M. F. Subbotin, G. A. Shayn,  
I. V. Obreimov, A. R. Prikhod'ko, I. V. Rodnikova, A. S. Zavel'skiy,  
S. Kh. Matushevskiy, M. N. Reyfman, Yu. M. Sukharevskiy, and V. S. Nesterov.  
Papers submitted at the Jun session by: A. N. Kolmogorov, V. K. Arkad'yev,  
and A. V. Shubnikov.

PA 57T15

USSR/Nuclear Physics -- Beta

Particles

Nuclear Physics -- Gamma Rays

Nov/Dec 48

"Forms of Beta-Spectra of the  $\lambda_n$  Series," A. S. Zavel'skiy, M. M. Rejman, S. Kh. Matusevskiy, 11 pp

"Is Ak Nauk SSSR, Ser Fiz" Vol III, No 6

Investigates upper and lower limits of beta-spectrum, and establishes new value for the upper limit of  $Pb^{212}$ . Obtains new method of experimentally evaluating the coefficient of nuclear conversion, and the symmetrical character of gamma-rays attending beta-disintegration.

25/49T86

ZAVEL'SKIY, A. S.

PA 25/49T86

CA

*$\beta$ -Disintegration of radium E. A. S. Zavel'skil, O. Ya. Umarov, and S. Kb. Matulshvskil. Zhur. Eksp. Teori. Fiz. 29, 1136-46 (1949).—The  $\beta$ -spectrum of Ra E was analyzed at high energies with a source deposited on Al; for low energies a source on mica 0.5  $\mu$  thick was used. Two high-energy components ( $1165 \pm 5$  e.kv.) and ( $1080 \pm 3$  e.kv.) were found with an intensity ratio of 11.5:1. The continuous spectrum showed a large no. of low-energy electrons.*

P. H. Murray

ZAVEL'SKIY, A.S.

ANDREYEV, A.B.; ANTONOV, A.I.; ARAPOV, P.P.; BARMASH, A.I.; BEDNYAKOVA, A.B.; BENIN, G.S.; BERESHEVICH, V.V.; BERNSTEIN, S.A.; BITUTSKOV, V.I.; BLYUMENBERG, V.V.; BOMCH-BRUYEVICH, M.D.; BORMOTOV, A.D.; BULGAKOV, N.I.; VEKSLER, B.A.; GAVRILENKO, I.V.; GENDLER, Ye.S., [deceased]; GERLIVANOV, N.A., [deceased]; GIBSHMAN, Ye.Ye.; GOLDOVSKIY, Ye.M.; GORBUNOV, P.P.; GORYALOV, F.A.; GRIMBERG, B.G.; GRYUNER, V.S.; DANOVSKIY, N.F.; DZEVUL'SKIY, V.M., [deceased]; DREMAYLO, P.G.; DYBETS, S.G.; D'YACHENKO, P.F.; DYURNBAUM, N.S., [deceased]; YEGORCHENKO, B.F. [deceased]; YEL'YASHKEVICH, S.A.; ZHEREBOV, L.P.; ZAVEL'SKIY, A.S.; ZAVEL'SKIY, F.S.; IVANOVSKIY, S.R.; ITKIN, I.M.; KAZHDAN, A.Ya.; KAZHINSKIY, B.B.; KAPLINSKIY, S.V.; KASATKIN, F.S.; KATSAUROV, I.M.; KITAYGORODSKIY, I.I.; KOLESHNIKOV, I.F.; KOLOSOV, V.A.; KOMAROV, N.S.; KOTOV, B.I.; LINDE, V.V.; LEBEDEV, H.V.; LEVITSKIY, N.I.; LOKSHIN, Ya.Yu.; LUTTSAU, V.K.; MANNERBERGER, A.A.; MIKHAYLOV, V.A.; MIKHAYLOV, N.M.; MURAV'YEV, I.M.; NYDEL'MAN, G.R.; PAVLYSHKOV, L.S.; POLUYANOV, V.A.; POLYAKOV, Ye.S.; POPOV, V.V.; POPOV, N.I.; RAKHLIN, I.Ye.; RZHEVSKIY, V.V.; ROZENBERG, G.V.; ROZENTRETER, B.A.; ROKOTYAN, Ye.S.; RUKAVISHNIKOV, V.I.; RUTOVSKIY, B.N. [deceased]; RYVKIN, P.M.; SMIRNOV, A.P.; STEPANOV, G.Yu.; STEPANOV, Yu.A.; TARASOV, L.Ya.; TOKAREV, L.I.; USPASSKIY, P.P.; FEDOROV, A.V.; FERRE, N.R.; FRENKEL', N.Z.; KHET'ETS, S.Ya.; KHLOPIN, M.I.; KHODOT, V.V.; SHAMSHUR, V.I.; SHAPIRO, A.Ye.; SHATSOV, N.I.; SHISHKINA, N.N.; SHOR, B.R.; SHPICHENETSKIY, Ye.S.; SHPRINK, B.M.; SHTERLING, S.Z.; SHUTTY, L.R.; SHUKHAL'TER, L. Ya.; ERVAYS, A.V.;

(Continued on next card)

ANDREYEV, A.B. (continued) .... Card 2.

YAKOVLEV, A.V.; ANDREYEV, Ye.S., retsenzent, redaktor; ~~BERKE~~  
 GEYM, B.M., retsenzent, redaktor; BERMAN, L.D., retsenzent, redaktor;  
 BOLTINSKIY, V.N., retsenzent, redaktor; BONCH-BRUYEVICH, V.L.,  
 retsenzent, redaktor; VELLER, M.A., retsenzent, redaktor; VINOGRADOV,  
 A.V., retsenzent, redaktor; GUDTSOV, N.T., retsenzent, redaktor;  
 DEGTYAREV, I.L., retsenzent, redaktor; DEM'YANYUK, F.S., retsenzent;  
 redaktor; DOBROSMYSLOV, I.N., retsenzent, redaktor; YELANCHIK, G.M.  
 retsenzent, redaktor; ZHEMOCHKIN, D.N., retsenzent, redaktor;  
 SHURAVCHENKO, A.N., retsenzent, redaktor; ZLODREYEV, G.A., retsenzent,  
 redaktor; KAPLUNOV, R.P., retsenzent, redaktor; KUSAKOV, M.M.,  
 retsenzent, redaktor; LEVINSON, L.Ye., [deceased] retsenzent, redaktor;  
 MALOV, N.N., retsenzent, redaktor; MARKUS, V.A. retsenzent, redaktor;  
 METELITSYN, I.I., retsenzent, redaktor; MIKHAYLOV, S.M., retsenzent;  
 redaktor; OLIVETSKIY, B.A., retsenzent, redaktor; PAVLOV, B.A.,  
 retsenzent, redaktor; PANYUKOV, N.P., retsenzent, redaktor; PLAKSIN,  
 I.N., retsenzent, redaktor; RAKOV, K.A. retsenzent, redaktor;  
 RZHAVINSKIY, V.V., retsenzent, redaktor; RIMBERG, A.M., retsenzent;  
 redaktor; ROGOVIN, N. Ye., retsenzent, redaktor; RUDENKO, K.G.,  
 retsenzent, redaktor; RUTOVSKIY, B.N., [deceased] retsenzent,  
 redaktor; RYZHOV, P.A., retsenzent, redaktor; SANDOMIRSKIY, V.B.,  
 retsenzent, redaktor; SKRAMAYEV, B.G., retsenzent, redaktor;  
 SOKOV, V.S., retsenzent, redaktor; SOKOLOV, N.S., retsenzent,  
 redaktor; SPIVAKOVSKIY, A.O., retsenzent, redaktor; STRAMENTOV, A.Ye.,  
 retsenzent, redaktor; STRELETSKIY, N.S., retsenzent, redaktor;  
 (Continued on next card)

ANDREYEV, A.V., (continued) .... Card 3.

TRET'YAKOV, A.P., retsenzent, redaktor; FAYERMAN, Ye.M., retsenzent, redaktor; KHACHATYROV, T.S., retsenzent, redaktor; CHERNOV, H.V., retsenzent, redaktor; SHERGIN, A.P., retsenzent, redaktor; SHESTOPAL, V.M., retsenzent, redaktor; SHESHKO, Ye.F., retsenzent, redaktor; SHCHAPOV, N.M., retsenzent, redaktor; YAKOBSON, M.O., retsenzent, redaktor; STEPANOV, Yu.A., Professor, redaktor; DEM'YANYUK, F.S., professor, redaktor; ZNAMENSKIY, A.A., inzhener, redaktor; PLAKSIN, I.N., redaktor; RUTOVSKIY, B.N. [deceased] doktor khimicheskikh nauk, professor, redaktor; SHUKHGAL'TER, L. Ya, kandidat tekhnicheskikh nauk, dotsent, redaktor; BRESTINA, B.S., redaktor; ZNAMENSKIY, A.A., redaktor.

(Continued on next card)

ANDREYEV, A.V. (continued) .... Card 4.

[Concise polytechnical dictionary] Kratkii politekhnicheskii slovar'. Redaktsionnyi sovet; IU.A.Stepanov i dr. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1955. 1136 p. (MLRA 8:12)

1. Chlen-korrespondent AN SSSR (for Flaksin)  
(Technology--Dictionaries)

ZAVEL'SKIY, D. YA.

DZHAFAROV, A.A. (Baku); ZAVEL'SKIY, D.Ya. (Baku); SHTURMIN, V.O.; BADAL'YANTS.

Using gas in steam and diesel locomotives. Zhel. dor. transp. 40  
no.2:45-51 F '58. (MIRA 11:3)

1. Nachal'nik Azerbaydzhanskoy zheleznoy dorogi (for Dzhafarov).
2. Nachal'nik otдела motorno-rel'sovogo transporta Azerbaydzhanskoy zheleznoy dorogi (for Zavel'skiy).
3. Nachal'nik tekhnicheskogo otдела Severo-Kavkazskoy dorogi (for Shturmin).
4. Nachal'nik tekhnicheskogo byuro Krasnodarskogo otdeleniya Severo-Kavkazskoy dorogi (for Badal'yants).

(Locomotives) (Gas as fuel)



POPOV, Aleksandr Anatol'yevich; SHVANTS, Raul' Yanovich [deceased]; ZAVEL'-  
SKIY, D.Ia., red.; AL'TMAN, T.B., red. izd-va.

[Efficiency of using fuel gases on various kinds of transportation;  
practice of the Azerbaijan Economic Region] Effektivnost' primene-  
niia goriuchikh gazov na razlichnykh vidakh transporta; na primere  
Azerbaidzhanskogo ekonomicheskogo raiona. Baku, Azerbaidzhanskoe gos.  
izd-vo neft. i nauchno-tekh. lit-ry, 1960. 121 p. (MIRA 14:7)  
(Gas as fuel)

1ST AND 2ND ORDERS																										1ST AND 2ND ORDERS																									
PROCESSES AND PROPERTIES INDEX																																																			
<p>CP</p> <p>25</p> <p>Preparation of naphthalene AM-28. I. Z. Zavelshil. <i>Antikobrasochaya Prom. S.</i> No. 1, 19-27(1933); cf. preceding abstr.—The condensation of 2,1-hydroxynaphthoic acid with <i>m</i>- and <i>p</i>-nitroaniline and <math>\text{PCl}_5</math> has been carried out and the <i>m</i>-deriv., m. 245-6°, found to be identical with the com. product; the <i>p</i>-compd., m. 258-6°. The use of Russian petroleum, b. 130-5°, in place of PhMe as solvent gives an improved yield (45-6%).</p> <p>H. C. A.</p>																																																			
<p>150-354 METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			
<p>STOCK SYMBOLS</p>																																																			
<p>STOCK SYMBOLS</p>																																																			

100 AND 4TH COAST  
 1ST AND 122 COAST  
 PROCESSES AND PROPERTIES AND  
 10  
 CA  
 Reduction of nitroacetic and nitrophenetic. D. Z.  
 Zaytskikh, I. A. Pomenko and L. G. Krolit. *Anal. Khim.*  
*Trudy Khim. Prom.* 4, 202-8 (1933).—A yield of 90-10% of  
 108 8.6% pure  $p$ -MeOC<sub>6</sub>H<sub>4</sub>NH<sub>2</sub>, m. 57° (lit. 63°),  
 was obtained in the form of a floating solid cake by boiling  
 for 7 hrs.  $p$ -MeOC<sub>6</sub>H<sub>4</sub>NO<sub>2</sub> with 2 parts of 82% Na<sub>2</sub>S in 2.5  
 parts of H<sub>2</sub>O and allowing to cool. By a similar method  
 and distn. in *vacuo* were obtained 80-15% of 99-9.7% pure  
 and 12% of 99.5-100%  $p$ -MeOC<sub>6</sub>H<sub>4</sub>NH<sub>2</sub>. Chas. Blando  
 Condensation of aminoguanidine with fluorone and  
 2-nitrofluorenone. Angela Cansoni de Degiori. *Anal. Chim.*  
*Argentin.* 22, 41-4 (1934).—To 1.8 g.  
 asoc. quim. Argentina 22, 41-4 (1934).—To 1.8 g.  
 fluorone in 20 cc. of alc., add 1.7 g. of aminoguanidine  
 sulfate in 2 cc. of water and boil under reflux until a pale  
 yellow ppt. forms, cool, filter, wash with water, then  
 with hot alc. until colorless, to remove unreacted fluo-  
 none; yield 2 g. of C<sub>14</sub>H<sub>9</sub>N<sub>3</sub>SO<sub>2</sub> (II), slightly sol. in AcOH  
 and boiling water, very sol. in pyridine, insol. in most  
 common solvents, cryst. from AcOH in fine, pale yellow  
 needles m. 217-8° (uncor.). Treating an aq. suspension  
 of I with NH<sub>3</sub> forms fluoroneaminoguanidine, slightly  
 sol. in AcOH and boiling water, very sol. in pyridine, in-  
 sol. in most common solvents, cryst. from AcOH in  
 fine, lemon-yellow needles m. 205-6° (uncor.). To 1.1 g.  
 of 2-nitrofluorenone in 50 cc. of boiling AcOH add 1 g.  
 of aminoguanidine sulfate in 1 cc. of water, boil 5 hrs.  
 under reflux, cool, pptg. small lemon-yellow crystals and  
 large orange crystals, the latter being unreacted 2-nitro-  
 fluorenone, filter, wash with water, treat with 50 cc. of  
 boiling AcOH to remove unreacted 2-nitrofluorenone,  
 giving 0.7 g. of C<sub>14</sub>H<sub>9</sub>N<sub>3</sub>SO<sub>2</sub> (II), insol. in common sol-  
 vents, m. about 300°. Treating an aq. suspension of II  
 with NH<sub>3</sub> forms 2-nitrofluorenoneaminoguanidine (C<sub>14</sub>H<sub>9</sub>N<sub>3</sub>O<sub>2</sub>),  
 slightly sol. in Et<sub>2</sub>O, hot pyridine, insol. in  
 most common solvents, m. 205-8° (uncor.).  
 E. M. Symmes

*C*

*72*

Production of insoluble azo dyes on the fabric. D. Z. Zayt'skiy, Russ. 18,687, Aug. 31, 1930. Fabric is dyed with a mixt. of alkali salts of azo components, nitrite, diazoizable amine and a dispersing agent for the aromatic amines (e. g., triethanolamine), with or without other dispersing agents contg. sulfo or carboxyl groups.

APP-51A METALLURGICAL LITERATURE CLASSIFICATION

FROM SYNDICATE  
LONDON 1930

SECTION  
LONDON 1930

10

CA

Secure disassembly compounds. D. Z. Zavel'ski.  
 U.S.S.R. 66,113, May 31, 1961. Sol. compds. of the  
 type:  $\text{ArN}:\text{NH} \begin{smallmatrix} \text{Alk.} \\ \text{SO}_3\text{M} \end{smallmatrix}$  are obtained by treating a soln.  
 of a salt of alkylsulfamic acid in a neutral medium with a  
 soln. of an arylhydrazine salt  
 M. Hensch

ASD-SEA METALLURGICAL LITERATURE CLASSIFICATION

SECTION ONE										SECTION TWO										SECTION THREE										SECTION FOUR									
SECTION ONE										SECTION TWO										SECTION THREE										SECTION FOUR									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

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J. M. K. 2001

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**CIA-RDP86-00513R001964010007-3"**

... with the 2,4-DN deriv. does this even at pH 3.5-4.0;  
2,4-DN or 2,4-DN deriv. show cleavage ev. 2 to neutral  
soln. on heating. Pure I with 4- or 3-DN substituents

... in 11.0 on a water bath, 6.62% II is detected; letting  
the material stand in air as described above gave 35.5% II.

ZAVEL'SKIY, D.Z.; LISHNEVSKAYA, L.A.

Interaction of diazo compounds with sulfamic acid and with its derivatives. Part 3. Study of the hydrolytic decomposition of aryl-1-methyl-3-triazenesulfonic acids-4. Zhur.ob.khim. 25 no. 2:362-371 F '55. (MIRA 8:6)

(Sulfonic acids) (Triazene)

:

ZAVEL'SKIY, D. Z.

AUTHORS: Zavel'skiy, D. Z. and Lishnevskaya, L. A. 79-2-25/58

TITLE: Reaction of Diazo-Compounds with Sulfamic Acid and its Derivatives.  
Part 4. Diazonium Salts of Methylaryltriazene-N-Sulfonic Acids  
(Vzaimodeystviye diazosoedineniy s sul'faminovoy kislotoy i yeye  
proisvodnymi. IV. O diazoniyevykh solyakh metilariltriazene-N-sul'fokislota)

PERIODICAL: Zhurnal Obshchey Khimii, 1957, vol 27, No 2, pp 388-398 (U.S.S.R.)

ABSTRACT: The reaction of methylsulfamic acid with nitroaryldiazo compounds in highly acid media yielded diazonium salts of aryl-1-methyl-3-triazene-sulfonic acid-3. Analysis of the diazo salts by nitrosation confirmed the chemical formula  $C_{13}H_{13}O_8N_7S$  but when combined in a neutral medium with m-toluedenamine or beta-naphthol it showed that only one mole of nitrodiazobenzene, of the two moles contained in the investigated product, is included in the combination. It was established that the synthesis of the diazonium salts can also be realized by the reaction of salt exchange between the diazo chloride salts and the potassium salts of aryl-1-methyl-3-triazenesulfonic acid-3. The properties and the reactions

Card 1/2

79-2-25/58

Reaction of Diazo-Compounds with Sulfamic Acid and its Derivatives.  
Part 4.  
APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964010007-3

leading to the decomposition of the diazonium salts were investigated. It was found that the stability of the salts decreases with the increase in the electrophilic characteristics of the substitutes in the nucleus of the diazo radicals which are included in the composition of the salts.

7 tables. There are 4 references, all of which are Slavic

ASSOCIATION: State Institute of Applied Chemistry

PRESENTED BY:

SUBMITTED: February 10, 1956

AVAILABLE: Library of Congress

Card 2/2

ZAVEL'SKIY, D.Z.; LISHNEVSKAYA, L.A.

Reaction of diazo compounds with sulfamic acid and with its derivatives. Part 6: Indicator properties of 4-aminoazobenzene-H-sulfonates. Zhur.ob.khim. 27 no.5:1339-1345 My '57. (MLRA 10:8)  
(Aniline) (Diazo compounds) (Sulfamic acid)

ZHYEL'SKIY, D.Z.

GRACHEV, I.V.; GUSEV, G.G.; ZAVEL'SKIY, D.Z.

Neutral form of diazo compounds, Zhur.ob.khim, 27 no.10:2820-2829  
O '57.

(MIRA 11:4)

(Diazo compounds)

AUTHORS: Zavel'skiy, D. Z., Lishnevskaya, L. A. 79-28-3-42/61

TITLE: The Reaction of Diazo-Compounds With Sulfamic Acid and Its Derivatives (Vzaimodeystviye diazosoedineniy s sul'faminovoy kislotoy i yeye proizvodnymi). VII. On the Reactions of the Diazo-Compounds With Unsaturated Sulfamic Acid (VII. O reaktsiyakh diazosoedineniy s nezameshchennoy sul'faminovoy kislotoy)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 3, pp. 745-755 (USSR)

ABSTRACT: The authors suggested and discussed the reaction mechanism between diazo-compounds and unsaturated sulfamic acid. This mechanism presupposes the initial formation of aryltriazeno-N-sulfo acid which tautomerically converts to the unstable form which again is split up separating arylamine, nitrogen and sulfuric acid. The suggested mechanism was supported by the synthesis of the 1-anthraquinonyltriazene-3-sulfonate by condensation of the 1-diazoanthraquinone with sulfamic acid as well as by the capability of this triazene easily to decompose forming 1-aminoanthraquinone, nitrogen and sulfuric

Card 1/3



The Reaction of Diazo-Compounds With Sulfamic Acid and Its Derivatives. VII. On the Reactions of the Diazo-Compounds With Unsaturated Sulfamic Acid 79-28-3-42/61

acid. It is assumed that the stability of the 1-anthraquinonyltriazene-N-sulfonate compared with its analogs, depends on the fact that the movable hydrogen of the triazene group is situated at the nitrogen which is neighbouring the anthraquinonyl radical and forms the hydrogen bond with the carbonyl of anthraquinone. The position of the movable hydrogen, neighbouring anthraquinonyl, is proved by the decomposition of the 1-anthraquinonyltriazene-3-sulfonate while forming aminoanthraquinone, nitrogen and sulfuric acid, as well as by the formation of the 1-methylaminoanthraquinone in the course of decomposition in the methylation of this triazene. It was found that the 1-anthraquinonyltriazene-3-sulfonate easily splits up into 1-anthraquinonylacid and sulfuric acid under the action of an alkali. The authors suggested an interpretation of this reaction in the form of a nucleophilic substitution by the action of the hydroxyl ion. It was found that the 1-anthraquinonyltriazene-3 sodiumsulfonate exists in a yellow and in a red color, the former being the more resistive. There are 13 references, 4 of which are Soviet.

Card 2/3

AUTHORS: Zavel'skiy, D. Z., Lishnevskaya, L. A. 79-28 3-43/61

TITLE: The Reaction of Diazo Compounds With Sulfamic Acid and Its Derivatives (Vzaimodeystviye diazosoedineniy s sul'faminovoy kislotoy i yeye proizvodnymi). VIII. On the Diazo Salts of Arylsulfamic Acids (VIII. O diazoniyevykh solyakh arilsul'faminovykh kislot)

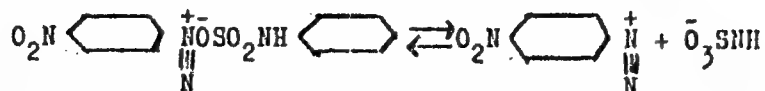
PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 3, pp. 755-767 (USSR)

ABSTRACT: This work is based on a previous publication (reference 1). These diazo compounds form with phenylsulfamic acid diazo salts which are easily precipitated from water, easily to be obtained in a crystalline form and which are deeply colored; this salt is similar with respect to its properties to the 4-nitrophenyldiazo salt described in reference 1. It is of interest that the saturated solutions of all these deeply colored salts are also of such deep color but that they become slightly yellow on dilution. From this can be concluded that these colored diazophenylsulfaminates decompose again into colorless ions in the dissociation in water:

Card 1/3

The Reaction of Diazo Compounds With Sulfamic Acid and Its  
Derivatives. VIII. On the Diazo Salts of Arylsulfamic Acids

79-28 3-43/61



As is known the sulfates and arylsulfonates of such diazo compounds are colorless or slightly yellow in solid state. Therefore the properties of the phenylsulfaminates seemed to be very strange and they caused the authors to carry out the syntheses of some salts of diazo compounds of the benzene series and of two arylsulfamic acids in order to explain how their color depends on their character as well as on the amount of the substituents in both benzene nuclei. Thus the arylsulfamic acids form deeply colored salts of all shades with the aryldiazo compounds having electron-accepting substituents. It was shown that the more electrically negative the substituents in the aryldiazo cation the deeper is the color of the arylsulfamine salt formed by it. The same way the nucleophilic substituents in arylsulfamic acid are acting. In water the diazosulfaminates form much deeper colored saturated solutions than the solid salts which decolor in dissolution and therefore do not obey Lambert's theorem. The cause of the color of the diazoaryl sulfaminates is the formation

Card 2/3

The Reaction of Diazo Compounds With Sulfamic Acid and Its  
Derivatives. VIII. On the Diazo Salts of Arylsulfamic Acids

79-28 5-43/61

of undissociated salts by the components. The decolori-  
zation of their aqueous solutions is effected by the dissoci-  
ation into colorless cations and anions in dilution. There  
are 6 figures, 3 tables, and 2 references which are  
Soviet.

SUBMITTED: March 30, 1957

Card 3/3

AUTHORS: Zavel'skiy, D. Z., Lishnevskaya, L. A. 79-28-4-36/60

TITLE: Interaction Between Diazo Compounds and Sulfamic Acid and Its Derivatives (Vzaimodeystviye diazosoyedineniy s sul'faminovoy kislotoy i yeye proizvodnymi). IX. On the Cause for the Color of the Diazonium Salts of Aryl Sulfamic Acids (IX. O prichinakh tsvetnosti diazoniyevykh soley arisul'faminovykh kislot)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 4, pp. 1010-1019 (USSR)

ABSTRACT: The peculiar properties of the diazonium aryl sulfominates compared with most of the other diazonium salts, made the authors explain the question. What the structural causes in aryl sulfamic acid and especially in phenyl sulfamic acid for the intensive color of the diazonium salts are. A series of control experiments had shown that the diazo compounds of the benzene series in an interaction with non substituted sulfamic acid in an acid medium give colorless solutions. Solid salts cannot be separated out. Summary: The interaction between the diazo compounds in an acid

Card 1/2

Interaction Between Diazo Compounds and Sulfamic Acid 79-28-4-36/60  
and Its Derivatives. On the Cause for the Color of the Diazonium Salts  
of Aryl Sulfamic Acids

medium and sulfamic, benzyl sulfamic, and N-ethylphenylsulfamic acids was investigated. Diazonium salts with enumerated sulfamic acids were obtained. 2.) It was shown that the diazonium salts of the sulfamic acid and its alkyl and aralkyl substituents are colorless or only weakly colored. The intensive color is a property of only the diazonium aryl sulfonates. 3.) It has been found that the color of the diazonium aryl sulfonates is independent of the intermolecular interactions. It also depends only to a low degree on the hydrogen binding which is possible between the most outside nitrogen of the diazonium cation and the hydrogen in the imino group. 4.) The hypothesis was set up that the cause for the color of the diazonium sulfonates can be a salt compound of special kind, which has the ability to conduct the conjugation effect between the electron accepting diazonium cation and the electron donating aryl sulfonate anion. There are 12 references, 9 of which are Soviet.

SUBMITTED: April 6, 1957

Card 2/2

AUTHORS: Baranchik, N. M., Grachev, I. V. (Deceased), 79-28-5-53/69  
~~Zavolotskiy, D. Z.~~

TITLE: Structure and Conversions of the Methylaryl-N-Nitro-  
triazenes (Stroyeniye i prevrascheniya metilaril-N-nitro-  
triazenov).  
III. On Some Properties of the Methylaryl-N-Nitrotriazenes  
(III O nekotorykh svoystvakh metilaril-N-nitrotriazenov)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 5,  
pp. 1340-1351 (USSR)

ABSTRACT: In continuation of earlier works by the authors (refs 1-3)  
on the properties of the methylaryl-N-nitrotriazenes with  
regard to the cleavage of these compounds into the initial  
products in acidous and neutral medium, it was determined  
in this paper that, different from the N-sulfo acids of  
methylaryltriazenes which split off their sulfo group  
in the acidous medium, the N-nitrosubstituted methylaryl-  
triazenes do not separate the nitrogroup on the same  
conditions, but are decomposed to phenol, nitrogen, alcohol  
and nitrous oxide. The reaction process is explained by the  
greater polarity of the binding between nitrogen and sulfur

Card 1/3

Structure and Conversions of the Methylaryl-N-Nitro-  
triazenes.

79-28-5-53/69

III. On Some Properties of the Methylaryl-N-Nitrotriazenes

compared to that between the two nitrogen atoms. It was shown that the methylaryl-N-nitrotriazenes have the properties of pseudo acids. They dissolve in lyes and basic solvents with strongly increased coloring. When these solutions are left standing, they decompose into methylamine, nitrogen and formaldehyde. An interpretation of the reaction mechanism of their cleavage in alkaline media is proposed, according to which, in the beginning, the proton splits off from the methyl group under the action of the hydroxyl or the methoxyl; then it is supposed to form into an unstable carbenate anion which further <sup>on</sup> converts into the N-methylene derivative of aryltriazene by splitting off of the nitro-group in the form of a nitrite anion. It is shown that the proposed mechanism explains well the reactions of various aliphatic N-nitro- and C-nitro derivatives which take place in an alkaline medium with the splitting off of the nitro-group in the form of a nitrite anion and with intermolecular regrouping of the bindings. It is also shown that such reactions must be classified to the known class of nucleo-

Card 2/3



Structure and Conversions of the Methylaryl-N-Nitro- 79-26-5-55/69  
triazones.

III. On Some Properties of the Methylaryl-N-Nitrotriazones

philic cleavage reactions. There are 3 tables and 16  
references, 5 of which are Soviet.

SUBMITTED: May 3, 1967

Card 3/3

AUTHORS: Zavel'skiy, D. Z., Lishnevskaya, L. A. SOV/79-28-7-44/64

TITLE: The Reaction of the Diazo Compounds With Sulfamic Acid and Its Derivatives (Vzaimodeystviye diazosoedineniy s sul'faminovoy kislotoy i yeye proizvodnymi) X. On the Colored Salts of Acylaminoarylsulfo Acids and Diazonium Bases (X.O tsvetnykh solyakh atsilaminoarilsul'fokislot s diazoniyeverymi osnovaniyami)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol. 28, Nr 7, pp. 1925 - 1930 (USSR)

ABSTRACT: In papers it is pointed out that (Ref 3) Schröter (Shreter) synthesized deeply colored and stable products in the reaction of diazonium salts with acylaminoarylsulfo acids. The properties of these compounds seemed to the authors, according to their description, to be similar to those arylsulfaminates of diazonium compounds investigated by themselves; hence they repeated the work of Schroeter, using the benzenesulfonylsulfanilic acid which is closest to the arylsulfamic acids as regards its structure; this was done for the purpose of comparing the structure and properties with the arylsulfaminates of the diazonium compounds. It was found that the colored reaction products

Card 1/2

The Reaction of the Diazo Compounds With Sulfamic Acid and Its Derivatives. X. On the Colored Salts of Acylaminoarylsulfo Acids and Diazonium Bases SOV/79-28-7-44/64

the diazonium compounds with acylaminoarylsulfo acids obtained by Schroeter were real diazonium salts. The acylaminoarylsulfonates of the diazonium compounds are the deeper colored the more electrophilic the substituents in the diazonium aryl ring are, and the smaller the acid character at the acyl is, and the more condensed benzene nuclei are contained in the aryl of the acylaminoarylsulfo acid. The table shows the dependence of the color of the diazonium salt of the anion of the arylsulfamino acid or acylaminoarylsulfo acid entering it. There are 3 figures, 1 table, and 8 references, 6 of which are Soviet.

SUBMITTED: April 6, 1957

1. Nitrogen compounds (Organic--Chemical reactions 2. Sulfamic acid esters--Chemical reactions 3. Dyes--Color

Card 2/2

ZAVEL'SKIY, D.Z.; LISHNEVSKAYA, L.A.

Interactions of diazo compounds with sulfamic acid and its derivatives. Part 11: Reasons for coloration of various diazo and heterocyclic amino salts. Zhur.ob.khim. 28 no.9:2560-2567 S '58.

(MIRA 11:11)

(Diazo compounds) (Amino compounds) (Coloring matter)

ZAVEL'SKIY, D.Z.; LISHNEVSKAYA, L.A.

Interactions of diazo compounds with sulfamic acid and its derivatives. Part 12: Diaryltriazene-N-sulfonic acids and their diazonium salts. Zhur.ob.khim. 28 no.9:2568-2577 S '58.  
(MIRA 11:11)

(Triazene) (Diazo compounds)

ZAVEL'SKIY, F. S.

PA 187T79

USSR/Physics - Thermal Conductivity Mar/Apr 51  
Measurements

"Thermal Bridge," V. S. Zavel'skiy, F. S.  
Zavel'skiy

"Avtomat i Telemekh" Vol XII, No 2, pp 172, 173

Describe apparatus using bridge circuit for rela-  
tive measurements of the coeff of thermal cond  
of materials. Submitted 12 Aug 50.

187T79

ZAVEL'SKIY, F.S.

Phase instrument for measuring time intervals of short duration. Zh.  
eksp. Teor. Fiz. 23, No.6, 709-11 '52. (MLRA 6:1)  
(PA 57 no.673:110 '54)

FERRONSKIY, V. I.; ZAVEL'SKIY, F. S.; SELIVANOV, L. V.; POLYAKOV, V. A.;  
DUBINCHUK, V. T.; PANTELEYEV, A. I.

Using methods of nuclear physics for solving problems of  
engineering geology and hydrogeology. Vop. gidrogeol. i inzh.  
geol. no.20:3-17 '62. (MIRA 16:4)

(Nuclear physics)  
(Engineering geology)  
(Water, Underground)



ZAVEL'SKIY, F. S.

Electricity, Dielectrics (1624)

Sh. statey Vses. zauch. politekh. in-ta, No 3, 1953, pp 58-62. "A Method of Testing the Dielectric Permeability of Rochelle Salt Piezoelectrics with the Aid of Discharge Curves."

Discusses three methods of testing dielectric permeability: (1) comparison method, (2) method of discharge onto a ballistic galvanometer, and (3) method of discharge curves. Indicates shortcomings of each method.

SO: Referativnyy Zhurnal--Fizika, No 1, Jun 54; (W-30785, 28 July 1954)

ZAVEL'SKIY, F. LS

Time Measurements

"Atomic clock." Nauka i zhizn' 20, No. 2, 1953.

Monthly List of Russian Accessions, Library of Congress  
June 1953. UNCL.

ZAVEL'SKIY, Fridrikh Samuilovich; TKACHUK, S.G., redaktor; MURATOVA, N.Ya,  
tekhnicheskiy redaktor.

[Time and its measurement; from the billionth of a second to billions  
of years] Vremia i ego izmerenie; ot milliardnykh delei sekundy do  
miliardov let. Moskva, Gos. izd-vo tekhn-teoret. lit-ry, 1955. 174 p.  
(Time measurements) (MLRA 9:5)

ANDREYEV, A.B.; ANTONOV, A.I.; ARAPOV, P.P.; BARMASH, A.I.; BEDNYAKOVA, A.B.; BENIN, G.S.; BERESNEVICH, V.V.; BERNSTEIN, S.A.; BITUTSKOV, V.I.; BLYUMENBERG, V.V.; BONCH-BRUYEVICH, M.D.; BORMOTOV, A.D.; BULGAKOV, N.I.; VEKSLER, B.A.; GAVRILENKO, I.V.; GENDLER, Ye.S., [deceased]; GERLIVANOV, N.A., [deceased]; GIBSHMAN, Ye.Ye.; GOLDOVSKIY, Ye.M.; GOEBUNOV, P.P.; GORYALNOV, F.A.; GRINBERG, B.G.; GRUNER, V.S.; DAIKOVSKIY, N.F.; DZEVUL'SKIY, V.M., [deceased]; DREMYLO, P.G.; DYBETS, S.G.; D'YACHENKO, P.F.; DYURNBAUM, M.S., [deceased]; YEGORCHENKO, B.F. [deceased]; YEL'YASHKEVICH, S.A.; ZHEREROV, L.P.; ZAVEL'SKIY, A.S.; ZAVEL'SKIY, F.S.; IVANOVSKIY, S.R.; ITKIN, I.M.; KAZHDAN, A.Ya.; KAZHINSKIY, B.B.; KAPLINSKIY, S.V.; KASATKIN, F.S.; KATSAUROV, I.N.; KITAYGORODSKIY, I.I.; KOLESNIKOV, I.F.; KOLOSOV, V.A.; KOMAROV, N.S.; KOTOV, B.I.; LINDE, V.V.; LEBEDEV, H.V.; LEVITSKIY, N.I.; LOKSHIN, Ya.Yu.; LUTTSAU, V.K.; MANNERBERGER, A.A.; MIKHAYLOV, V.A.; MIKHAYLOV, N.M.; MURAV'YEV, I.M.; NYDEL'MAN, G.M.; PAVLYSHKOV, L.S.; POLUYANOV, V.A.; POLYAKOV, Ye.S.; POPOV, V.V.; POPOV, N.I.; RAKHLIN, I.Ye., RZHEVSKIY, V.V.; ROZENBERG, G.V.; ROZENTRETER, B.A.; ROKOTAN, Ye.S.; RUKAVISHNIKOV, V.I.; RUTOVSKIY, B.N. [deceased]; RYVKIN, P.M.; SMIRNOV, A.P.; STEPANOV, G.Yu., STEPANOV, Yu.A.; TARASOV, L.Ya.; TOKAREV, L.I.; USPASSKIY, P.P.; FEDOROV, A.V.; FERRE, N.R.; FRENKEL', N.Z.; KHEYFETS, S.Ye.; KHLOPIN, M.I.; KHODOT, V.V.; SHAMSHUR, V.I.; SHAPIRO, A.Ye.; SHATSOV, M.I.; SHISHKINA, N.N.; SHOR, B.R.; SHPICHENETSKIY, Ye.S.; SHPRINK, B.M.; SHTERLING, S.Z.; SHUTYY, L.R.; SHUKHAL'TER, L. Ya.; ERVAYS, A.V.;

(Continued on next card)

ANDREYEV, A.B. (continued) .... Card 2.

YAKOVLEV, A.V.; ANDREYEV, Ye.S., retsenzent, redaktor; BERKEN-  
 GYM, B.M., retsenzent, redaktor; BERMAN, L.D., retsenzent, redaktor;  
 BOLTINSKIY, V.N., retsenzent, redaktor; BONCH-BRUYEVICH, V.L.,  
 retsenzent, redaktor; VELLER, M.A., retsenzent, redaktor; VINOGRADOV,  
 A.V., retsenzent, redaktor; GUDTSOV, N.T., retsenzent, redaktor;  
 DEGTYAREV, I.L., retsenzent, redaktor; DEM'YANYUK, F.S., retsenzent;  
 redaktor; DOBROSMYSLOV, I.N., retsenzent, redaktor; YELANCHIK, G.M.  
 retsenzent, redaktor; ZHEMOCHKIN, D.N., retsenzent, redaktor;  
 SHURAVCHENKO, A.N., retsenzent, redaktor; ZLODEYEV, G.A., retsenzent,  
 redaktor; KAPLUNOV, R.P., retsenzent, redaktor; KUSAKOV, M.M.,  
 retsenzent, redaktor; LEVINSON, L.Ye., [deceased] retsenzent, redaktor;  
 MALOV, N.N., retsenzent, redaktor; MARKUS, V.A. retsenzent, redaktor;  
 METELITSYN, I.I., retsenzent, redaktor; MIKHAYLOV, S.M., retsenzent;  
 redaktor; OLIVETSKIY, B.A., retsenzent, redaktor; PAVLOV, B.A.,  
 retsenzent, redaktor; PANYUKOV, N.P., retsenzent, redaktor; PLAKSIN,  
 I.N., retsenzent, redaktor; RAKOV, K.A. retsenzent, redaktor;  
 RZHAVINSKIY, V.V., retsenzent, redaktor; RIMBERG, A.M., retsenzent;  
 redaktor; ROGOVIN, N. Ye., retsenzent, redaktor; RUDENKO, K.G.,  
 retsenzent, redaktor; RUTOVSKIY, B.N., [deceased] retsenzent,  
 redaktor; RYZHOV, P.A., retsenzent, redaktor; SANDOMIRSKIY, V.B.,  
 retsenzent, redaktor; SKRAMTAYEV, B.G., retsenzent, redaktor;  
 SOKOV, V.S., retsenzent, redaktor; SOKOLOV, N.S., retsenzent,  
 redaktor; SPIVAKOVSKIY, A.O., retsenzent, redaktor; SYRAMENTOV, A.Ye.,  
 retsenzent, redaktor; STRELETSKIY, N.S., retsenzent, redaktor;  
 (Continued on next card)

ANDREYEV, A.V., (continued) .... Card 3.

TRET'YAKOV, A.P., retsenzent, redaktor; FAYERMAN, Ye.M., retsenzent, redaktor; KHACHATYROV, T.S., retsenzent, redaktor; CHERNOV, H.V., retsenzent, redaktor; SMERGIN, A.P., retsenzent, redaktor; SHESTOPAL, V.M., retsenzent, redaktor; SHESHKO, Ye.F., retsenzent, redaktor; SHCHAPOV, N.M., retsenzent, redaktor; YAKOBSON, M.O., retsenzent, redaktor; STEPANOV, Yu.A., Professor, redaktor; DEM'YANYUK, F.S., professor, redaktor; ZNAMENSKIY, A.A., inzhener, redaktor; PLAKSIN, I.N., redaktor; RUTOVSKIY, B.N. [deceased] doktor khimicheskikh nauk, professor, redaktor; SHUKHGAL'TER, L. Ya, kandidat tekhnicheskikh nauk, dotsent, redaktor; BRESTINA, B.S., redaktor; ZNAMENSKIY, A.A., redaktor.

(Continued on next card)

ANDREYEV, A.V. (continued) .... Card 4.

[Concise polytechnical dictionary] Kratkii politekhnicheskii slovar'. Redaktsionnyi sovet; IU.A.Stepanov i dr. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1955. 1136 p. (MLRA 8:12)

1. Chlen-korrespondent AN SSSR (for Plaksin)  
(Technology--Dictionaries)

ZAVEL'SKIY, P.S.

Analysis of the composition of sodium chloride with radioactive sodium [with summary in English]. Med.rad. 2 no.6:82-87 N-D '57.  
(MIRA 11:2)

1. Iz Moskovskogo nauchno-issledovatel'skogo instituta sanitarii i gigieny imeni P.F.Erismana  
(SODIUM CHLORIDE, determ.  
radiosodium labeled, radioactivity determ.)



ZAVEL'SKIY, F.S.

Mass coefficients of  $\gamma$ -ray absorption in soils and the errors  
incurred in gamma-measurements. Atom energ. 16 no.3:266-268 Mr  
'64. (MIRA 17:3)

FERONSKIY, V. I.; ZAVELSKIY, F. S.

"Gamma method for observing of dynamics of moisture percolating  
in soils and considered evaluating of ground Water Resources."  
Presented at the Symposium on Methods of evaluating resources  
of Underground Water with Emphasis on Arid Zone Problems, Athens  
11-20 Oct 1961

ZAVEL'SKIY, Fridirikh Samuilovich; KUZNETSOVA, Ye.B., red.; AKHLAMOV, S.N.,  
tekhn. red.

[Time and its measurement from trillionths of a second to billions  
of years] Vremia i ego izmereniye; ot billionnykh dolei sekundy do  
milliardov let. Izd.2., dop. Moskva, Gos. izd-vo fiziko-matem.  
lit-ry, 1961. 217 p. (MIRA 14:11)

(Time measurements)

ZAVEL'SKIY, F.S.

Determining the density and moisture of soils by the gamma-radiation absorption method under geometrical conditions of narrow and extensive beams. Razvod i okh. nedr 23 no.9:36-40 S '58. (MIRA 11:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut geodregeologii i inzhenernoy geologii.

(Gamma rays)

AUTHOR: Zavel'skiy, F.S.

SOV-132-58-9-9/18

TITLE: Determining the Density and Moisture of the Ground by the Method of Gamma-Radiation Absorption Under Conditions of the Geometry of Narrow and Wide Ray Beam (Opredeleniye plotnosti i vlazhnosti grunta metodom pogloshcheniya gamma-izlucheniya v usloviyakh geometrii uzkogo i shirokogo puchka luchey)

PERIODICAL: Razvedka i okhrana nedr, 1958, Nr 9, pp 36-40 (USSR)

ABSTRACT: In connection with research carried out by the VSEGINGEO, the author describes improvements in the method of determining the density and moisture of the ground by instruments working on principles of absorption of Gamma-ray radiation under conditions of the geometry of a narrow and wide ray beam. The defects of this method were: 1) the dependence of the Gamma-radiation absorption factor on the density and thickness of the ground and 2) the dependence of the degree of absorption of Gamma-radiation simultaneously on the density and moisture of the ground. As a result of this research practical solutions to eliminate these defects were found. Analytical and graphical calculations are given in detail.

Card 1/2

SOV-132-58-9-9/18

Determining the Density and Moisture of the Ground by the Method of Gamma-Radiation Absorption Under Conditions of the Geometry of Narrow and Wide Ray Beam

There are 2 graphs, 1 table and 8 references, of which 6 are Soviet and 2 American.

ASSOCIATION: VSEGINGEO

1. Soils--Density    2. Soils--Moisture content    3. Gamma rays  
--Absorption

Card 2/2

DOLIVO-DOBROVOL'SKIY, L.B., ZAVEL'SKIY, P.S.

Content of radiopotassium in city sewage [with summary in English]  
Med.rad. 3 no.3:65-68 My-Je '58 (MIRA 11:7)

1. Iz Moskovskogo nauchno-issledovatel'skogo instituta sanitarii  
i gigiyeny imeni Brismana.

(SEWAGE,

radiopotassium content in urban sewage (Rus))

(POTASSIUM, radioactive

determ. of content in urban sewage (Rus))

ZAVEL'SKIY, F.S.

~~Handbook on radioactive radiation and protective safeguards~~ by  
H.O. Gusev. Reviewed by F.S. Zavel'skii. Med. rad. 2 no.1:80-81  
Ja-F '57 (MIRA 10:5)  
(RADIOACTIVITY--SAFETY MEASURES)



ZAVEL'SKIY, F. S.

"Investigation of the Dependence of the Dielectric Constant of Barium Titanate  
Upon the Duration of Action of the Voltage," Zhur. eksper. i teor. fiz., 25, No.4,  
p. 479-484, 1953

Translation M-907, 21 Dec 55

ZAYEL'SKIY, G.S.

Development of the woodpulp and paper industry of the Perm Economic  
Region. Bum.prom. 35 no.11:13-15 N '60. (MIRA 13:11)

1. Permskiy sovnarkhoz.

(Perm Province--Paper industry)

ZAVEL'SKIY, O.S.

Twentieth anniversary of the Kana Woodpulp and Paper Combine.  
Bum.prom.31 no.2:3-5 F '56. (MIRA 9:6)

1.Direktor Kanskogo tsellyulozno-bumazhnogo kombinata.  
(Krasnokansk--Woodpulp industry) (Krasnokansk--Paper industry)

ZAVEL'SKIY, V.S.

Equipment for the study of antifrictional properties of engine oils  
by means of radioactive isotopes. Zav. lab. 23 no.6:743-744 Ja '57.

1. Nauchno-issledovatel'skiy avtomobil'nyy i avtomotornyy institut.  
(Lubrication and lubricants--Testing)  
(Radioisotopes--Industrial applications)

VYSOTSKIY, D.I.; ZAVEL'SKIY, V.S.

Measuring motor part wear with the aid of radioactive isotopes.  
Avt.1 trakt.prom. no.4:26-28 Ap '56. (MLRA 9:8)

1. Nauchno-issledovatel'skiy avtomotornyy institut.  
(Automobiles--Testing)  
(Radioactive tracers--Industrial application)  
(Mechanical wear)

RAMAYYA, K.S., doktor tekhn.nauk; LEBEDEV, S.A., kand.tekhn.nauk;  
ZAVEL'SKIY, V.S.; GRIGOR'YEV, M.A.

Effect of oil impurity on the wear of engines. Avt.prom. no.1:  
8-11 Ja '59. (MIRA 12:1)

1. Gosudarstvennyy soyuznyy ordena Trudovogo Krasnogo Znameni  
nauchno-issledovatel'skiy avtomobil'nyy i avtomotorny institut.  
(Automobiles--Lubrication)

AUTHOR:

ZAVELSKIY, Y.S.

32-6-33/54

TITLE:

A System for the Investigation of the Wear-Resisting Properties of Lubricating Oils by Means of Radioactive Isotopes. (Ustanovka dlya issledovaniya antiliznosnykh svoystv motornykh masel s pomoshch'yu radioaktivnykh izotopov, Russian)

PERIODICAL:

Zavodskaya Laboratoriya, 1957, Vol 23, Nr 6, pp 743-745 (U.S.S.R.)

ABSTRACT:

The system is described as follows: A hermetically tight chamber contains vapors. The material to be investigated is attached to a shaft and rotates in the chamber which is filled with steam. Stress is caused by means of a spring mechanism. The heating element is fastened to the shaft and to the wall of the chamber, which are heated up to a temperature of 100° C. Cooling water circulates on the other side of the shaft. Gas enters the chamber from the gasometer; it is mixed with air and controlled by means of a rheometer. The lubricating system circulates in a closed cycle. The oil is heated in the thermostat up to a temperature of 100° and is led to the gas vapors. The required amount of heating is obtained by regulating the electric current and amounts to 250°. The wear-resisting properties of the oils are determined on the basis of the wear of material, which is determined by means of radioactive

Card 1/2

32-6-33/54  
A System for the Investigation of the Wear-Resisting Properties of  
Lubricating Oils by Means of Radioactive Isotopes.

isotopes. The quantity of wear products is determined by counting the number of  $\beta$ -particles and  $\gamma$ -rays found by the counter. By introducing radioactive cobalt into a cast iron trial product (0.05%) the oil as well as the wear products contain cobalt. The amount of cobalt adhering to the filter is proportional to the amount of the wear. "SU" oil was investigated at a temperature of 150° with an addition of "TsJATIM-339" and in the case of an influence of SO<sub>2</sub> gas. A graph was made.

ASSOCIATION: Scientific Institute for the Construction of Automobiles and  
Automobile Engines  
PRESENTED BY:  
SUBMITTED:  
AVAILABLE: Library of Congress

Card 2/2



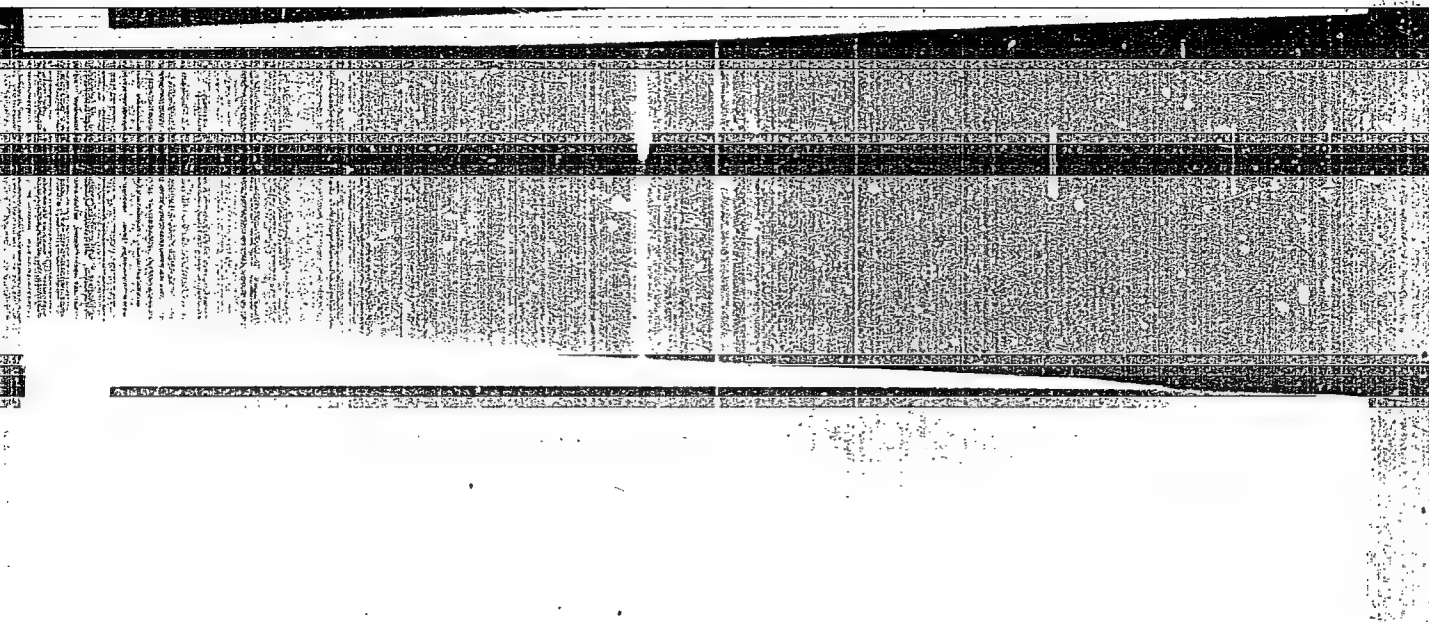
ЗАВЕРШЕНИЕ В.С.

The conference was organized by the G. Mashprom and conven-

tioned by a Ministry. A number of 230 delegates from automobile

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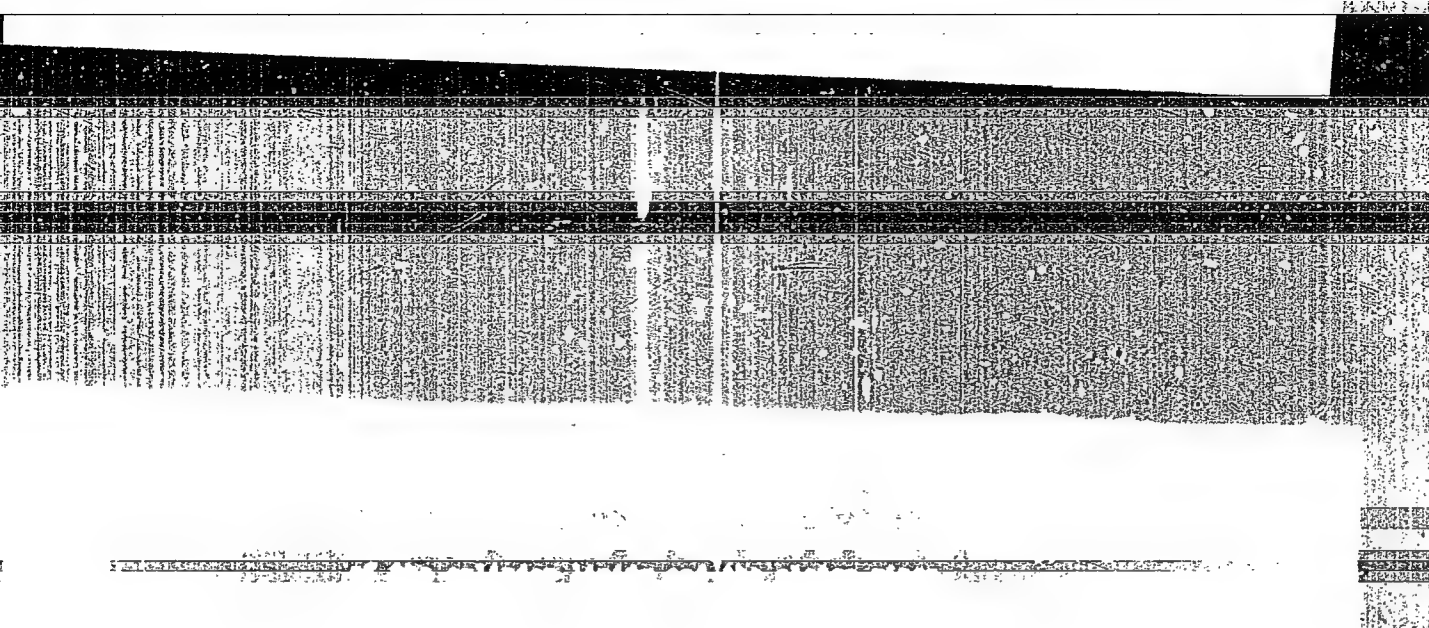


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CIA-RDP86-00513R001964010007-3"

36355  
S/081/62/000/005/082/112  
B162/B101

11.9700

AUTHORS: Ramayya, K. S., Zavel'skiy, V. S.

TITLE: Effect of additives to oil on corrosion wear of bearing alloys

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 5, 1962, 528, abstract 5M215 (Sb. "Prisadki k maslam i toplivam". M., Gostoptekhizdat, 1961, 283-290)

TEXT: The relation between wear on bearing alloys and oil quantity was determined on an ~~W.C.~~ (IPS-NAMI) apparatus, the bearing pair of which is a steel cylinder and two blocks made of bearing alloy pressed against it (pressure of 20 kg/cm<sup>2</sup>), with an oil temperature of 140°C; after 3 hrs operation, oleic acid (I) was added to the oil at a concentration corresponding to 1 mg KOH/g, and then after 3 hrs the concentration of I was raised to 2.5 - 3 mg KOH/g, the test lasting 12 - 15 hrs in all. The bearing alloys tested were ~~CO~~6-6 (SOS6-6) (88% Pb, 6% Sn, and 6% Sb) and for comparison babbitt E-83 (E-83), and the additives were Tsiatim-330

Card 1/2

Effect of additives ...

S/081/62/000/005/082/112  
B162/B101

(contains Co-naphthenate and sulfured oil), Co-naphthenate, Tsiatim-339, and DF-1 (DF-1) in industrial-50 oil. As the concentration of I rose in the oil to 1 mg KOH/g, the rate of wear of both alloys dropped with any of the additives, but with a further increase in the concentration of I in the case of the additives Tsiatim-330 and Co-naphthenate the rate of wear rose abruptly for the SOS6-6 alloy and did not increase for the B-03 alloy, in the case of the additive Tsiatim-339 it rose slightly less for the SOS6-6 alloy and in the case of the additive DF-1 it remained low. It is concluded that additives containing sulfured oil as anticorrosion component are not suitable in engines with bearings made of the SOS6-6 alloy and the best protection for such bearings is ensured by additives with the thiophosphoric group of type DF-1. Abstractor's note: Complete translation.

Card 2/2

RAMAYYA, K.S., doktor tekhn.nauk; ZAVEL'SKIY, V.S.

Effect of lubricant additives on the corrosive wear of bearing alloys. Avt.prom. no.3:21-24 Mr '61. (MIRA 14:3)

1. Gosudarstvennyy soyuznyy ordena Trudovogo Krasnogo Znameni nauchno-issledovatel'skiy avtomobil'nyy i avtomotorny institut.  
(Automobiles--Lubrication)

SOV/137-57-11-22411

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 11, p 255 (USSR)

AUTHORS; Vysotskiy, D.I., Zavel'skiy, V.S.

TITLE: Isotopes Used to Investigate Resistance of Materials to Wear on a Wear-testing Machine (Issledovaniye iznosostoykosti materialov pri pomoshchi radioaktivnykh izotopov na iznosnoy ustanovke)

PERIODICAL: V sb.: Izuch. iznosa detaley mashin pri pomoshchi radioaktivn. izotopov. Moscow, AN SSSR, 1957, pp 26-38

ABSTRACT: A description is offered of an isotope method developed by NAMI (State Automotive Scientific-research Institute) to investigate the resistance of materials to wear. The parts are activated by introducing isotopes into the molten metal. A method is set forth for calculating the amount of radio-isotope required to attain a given level of sensitivity. The distribution of the isotope in the metal is monitored by taking small specimens from various spots on the part or sample or by autoradiography. The wear testing of activated specimens is done with a laboratory friction machine (cylinder and block) or on a machine for producing wear on the faces of piston rings. Measurement of

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SOV/137-57-11-22411

Isotopes Used to Investigate Resistance of Materials (cont.)

wear in either type of equipment is done by determining the activity of the products of wear in the oil. The method of activation and measurement of wear described herein may be applied, without major change, to measuring the wear of parts of engines in operation. The need for safety measures in working with radioactive materials is emphasized, and some instructions are presented in this connection.

A.M.

Card 2/2

L 20345-63 EPF(c)/EWP(q)/EWT(m)/EWP(b)/BDS AFFTC/ASD/APOC Pr-4 BW/YW/JD/DJ  
ACCESSION NR: AT3002002 S/2664/61/000/000/0283/0290

AUTHORS: Ramayya, K.S.; Zavel'skiy, V.S. B

TITLE: Methods of investigation of the effectiveness of additives. The effect of additives for lubricants on the corrosional wear of bearing alloys. B

SOURCE: Prisadki k maslam i toplivam; trudy nauchno-tehnicheskogo soveshchaniya. Moscow, Gostoptekhizdat, 1961, 283-290.

TOPIC TAGS: lubricant, lubrication, additive, oil, bearing, corrosion, wear, Co, Pb, Sn, Sb, babbitt, alloy, SOS6-6, B-83, TsIATIM-330, naks, TsIATIM-339, DF-1, IPS-NAMI, naphthanate, sulfonate, diphosphoric, anticorrosion, antiwear.

ABSTRACT: The paper describes an experimental investigation intended to clarify the effect of lubricant additives on the corrosional wear of the alloy SOS6-6, which contains 88% Pb, 6% Sn, and 6% Sb, which is less stable in a corrosional oilly medium than Sn babbitts and which has encountered increasing troubles in oils with TsIATIM-330 (naks) additives. Among several automobile factories, the MZMA has issued specific instructions banning oil with naks from use in the Moskvich-407 automobile. It is postulated that the anticorrosional component in naks is not capable of coping with the corrosive aggressiveness of oils which increases with

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ACCESSION NR: AT3002002

increasing oil oxidation. The wear of the SOS6-6 alloy was determined in the IPS-NAMI tester and was compared with the Sn babbitt B-83. Additives tested: Naks, TsIATIM-339, and DF-1. The corrosional aggressiveness of oils with these additives relative to Pb was determined in the DK-2 equipment at 140°C (GOST 8245-56) in 25-hr tests. It was found that the anticorrosion properties of naks, per se, were as high as and even higher than those of the additive TsIATIM-339 and DF-1. However, it was found that after 5-7 hrs the naks loses its anticorrosion effectiveness completely, whereupon the Co naphthanate accelerates the Pb corrosion. The dependence of the wear of bearing alloys on the characteristics of an oil were evaluated by means of the IPS NAMI equipment (schematic cross section in article). In it a cylindrical element set on a rotating shaft is compressed between frictional-wear shoes. The shoes are compressed by a statically-weight-loaded selfcentering clamping device with zero resultant side load. The corrosional aggressiveness of the oil in which the entire friction pair is immersed is evaluated by the decrease in weight of the shoes. The dependence of the rate of wear of the SOS6-6 alloy on the acid concentration of the oil (vs. time), with and without the additives tested, is shown. While the test results shown cover an acidity range far in excess of that to be anticipated in an engine (3 mg KOH), it is concluded that additives which contain sulfonated oil as an anticorrosion component are not suitable for use in engines equipped with Pb-alloy bearing inserts of SOS6-6. It is also apparent that

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ACCESSION NR: ATJ002002

additives of the type DF-1, in which the anticorrosion component pertains to the diphosphoric group, afford the best protection for bearings made of Pb alloys. <sup>2</sup>  
Orig. art. has 7 figures and 1 table. <sub>27</sub>

ASSOCIATION: NAMI

SUBMITTED: 00

DATE ACQ: 23Jan63

ENCL: 00

SUB CODE: FL, CH, EL

NO REF SOV: 007

OTHER: 001

Card 3/3

RAMAYYA, K.S.; ZAVHL'SKIY, V.S.

Effect of sulfur dioxide on the wear of cast iron in lubricating medium. Khim. i tekhn. topl. i masel 4 no.1:31-34 Ja '59.

(MIRA 12:1)

1. Gosudarstvennyy soyuznyy ordena Trudovogo Krasnogo Znameni nauchno-issledovatel'skiy avtomobil'nyy i avtomotornyy institut.  
(Cast iron—Corrosion) (Sulfur dioxide)

25(6)

AUTHORS:

TITLE:

PERIODICAL:

ABSTRACT:

Zavel'skiy, V.S.; Vysotskiy, D.I.; Lozar', A.S.  
Conference on the Application of Radioactive Isotopes  
and Radiation in the Automobile and Tractor Industries  
44 (USSR)  
SOV/113-59-7

At the end of 1958, a scientific-technological conference was convened, dealing with the application of radioactive isotopes and radiation in the automobile and tractor industries. The conference was organized by NAMI in cooperation with MATI, the Komissiya po atomnoy energii otdeleniya tekhnicheskikh nauk AN SSSR (Atomic Energy Commission of the Technical Sciences Department of the AS USSR) and the automobile manufacturing department of NTO Mashprom. The majority of the 23 reports delivered at the conference dealt with the application of radioactive isotopes for studying the wear of internal combustion engines. I.M. Primakov reported on the application of Co

ED FOR RELEASE: 03/15/2001

CIA-R

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SOV/113-59-5-16/21

Conference on the Application of Radioactive Isotopes and Radiation  
in the Automobile and Tractor Industries

for investigating the causes of wear of the cylinder/  
piston group during the run-up of an engine. Using  
a D-6 engine, I.M. Primakov developed an experimental  
set-up for determining regularities and causes of  
the piston-cylinder wear. Into each of the top com-  
pression rings 12 radioactive cobalt inserts were  
pressed, having the dimensions 0.9x1.0 mm. The total  
activity of these inserts amounted to 100 millicurie.  
The wear was measured by determining the amount of  
radioactive particles in the oil using a gas dis-  
charge counter. I.M. Primakov established by this  
method that 75-80% of the total run-up wear is  
caused by the absence of oil at sliding or turning  
surfaces. The corrosion wear does not exceed 25%.  
The wear curve obtained for the run-up period may  
be divided into two phases - the starting and the  
warm-up time. For the D-6 engine the optimum run-up  
is achieved at 600-700 rpm. The rotating surfaces

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are run in during the warm-up after the "scoring" during the preceeding phase. The corrosive wear in this phase amounts to about 75%. A minimum wear is observed at 1,000 - 1,200 rpm. The warm-up of the engine working under load is connected with an increase of the overall wear. In the author's opinion it is advisable to operate the engine at idling speed during the first 5 - 10 minutes and then at small loads in low gear. B.P. Pakhomov presented the results of an investigation of the wear of the upper ring during forced operation of a compression ignition engine. These experiments were conducted on a one-cylinder D-14 engine. The upper piston ring was activated by cobalt-nickel alloy inserts of 0.9 mm diameter and 1.1 mm length. The wear was determined by a conventional method of measuring by a counter unit the radioactive cobalt accumulation in the drum of an oil centrifuge. The

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counters MS-4 and MS-11 were installed at the centrifuge inlet and at the oil inlet of the engine. The crankcase oil was changed after each test. Measurement results were recorded by MSShPr-054 self-recording galvanometers. The investigation lead to the conclusion that a load increase of the engine exceeding  $6 \text{ kg/cm}^2$  for the rated angle of fuel injection advance causes an intensive wear of the upper compression ring, limiting the forcing of the engine (permissible to 1740 rpm). The intensive wear is explained by an increase of the exhaust gas temperature during a load increase. In case the angle of fuel injection advance deviates from the rated value, the intensive wear will begin at lesser loads. The author recommends oil cooling to  $50 - 55^\circ$  and a cooling water temperature between  $70 - 80^\circ$ . V.I. Stetsenko explained a test arrangement for investigating the wear of crankshaft journals

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without using an engine. The wear resistance of a crankshaft is usually determined by experimental operation of an engine for 1,000 - 3,000 hours with subsequent micrometric measurements of the journals. Measuring the wear of a crankshaft by means of radioactive isotopes cuts the time required for investigation to a considerable extent, eliminating the necessity of disassembling the engine. Crankshaft elements of any series engine may be tested with this method, having journal diameters up to 95 mm. The surface of the journal under investigation is activated by 16 cobalt-nickel alloy inserts. The latter are evenly spaced on two circumferences corresponding to the usual areas of micrometric measurements. The wear is estimated by the amount of radioactivity, i.e. the amount of radioactive particles detained in the oil filter. The experiments conducted show that comparative wear resist-

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ance data may be obtained from materials used for manufacturing automobile and tractor crankshafts. V.P. Lebedev investigated the crankshaft journal wear on a full-size ZIL-120 engine installed on a test stand. The journals were activated with zinc-65 inserts, installed parallel to the axis of the journal. About 8 radioactive inserts were installed in the area of maximum wear. It is possible to determine the wear of a single journal by connecting the other bearings to a different oil reservoir. With this method considerably less oil is required, whereby also the radioactivity of the inserts could be reduced. D.I. Vysotskiy reported on a mobile highway laboratory built with a PAZ-653 bus. The laboratory was developed for investigation of constructional, technological and operational factors of engine wear. The equipment is powered by a AB-2 power plant. The wear is determined from the

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amount of radioactive particles found in the lubricant of the assembly under investigation. The mobile laboratory is equipped with an electrical dust measuring apparatus for determining the dust content of the air before and after passing thru the airfilter. Not only parts belonging to the bus, housing the laboratory, may be investigated, but also parts of other automobiles. For example, when determining engine wear, the crankcase of the engine under investigation is connected by hoses to the measuring equipment in the mobile laboratory and the oil is pumped thru the pick-up filters. The report of N.N. Velichkin, I.N. Nabiyeu and A.I. Nisnevich dealt with the investigation of the influence of different factors on the wear of tractor parts. It contained recommendations for a better sealing of the air intake ducts of tractor engines. A.Kh. Eliava explained the work conducted

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at NAMI in studying the influence of heating the fuel mixture on the carburetor engine wear. The author recommends using a combination of gas and water heating. V.S. Zavel'skiy and K.S. Ramayya reported on an investigation of factors influencing the wear of lubricated surfaces. The authors also investigated the gas corrosion influence on parts of the piston-cylinder group of an engine and the wear caused by oil decomposition products. D.M. Aronov and V.I. Golov presented the results of comparative tests of new antiknock admixtures for gasoline. The results showed that the experimental antiknock compounds had a low toxic effect and nearly met the requirements set for the lead antiknock compound R-9, but they increased engine wear. The test results necessitate the development of improved antiknock compounds on an iron basis and chemicals which are added to oils for neutralizing

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harmful effects of antiknock compounds. B.A. Zakhar-  
renko explained a method of measuring simultaneously  
the wear of two engines. The parts to be investigat-  
ed are activated by radioactive materials radiating  
gamma rays with considerably different energies.  
Two channels in the counting circuit having differ-  
ent discrimination levels are used for dividing  
at the counter the particles of different energies.  
The papers of S.V. Rummyantsev, R.A. Srapenyanets  
dealt with the application of radioactive isotopes  
as radiation sources used for detecting defects in  
metals. The report of R.A. Srapenyanets and S.S.  
Arabyan dealt with a new method of estimating the  
susceptibility of oils to carbon formation at pi-  
ston rings during the operation of the engine. For  
this purpose, radioactive cobalt<sup>60</sup> was put into the  
piston ring lock. A.Ya. Sergiyevskiy told of the  
experience made with gamma defectoscopy at the Avto

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in the Automobile and Tractor Industries

zavod imeni Likhacheva (Automobile Plant imeni Likhachev). He presented data on the application of standard instruments used by plant workers for inspecting welding seams and steel parts up to 200 mm thickness. The report of G.M. Azarevich and A.I. Nisnevich dealt with the application of radioactive isotopes for investigating the wear of non-metallic materials, especially rubber gaskets. V.E. Vaynshteyn and A.M. Proidzinskiy investigated the absorption of abrasive particles by bearing materials. A.N. Chertovskikh in cooperation with V.V. Kondashevskiy explained the application of radioactive isotopes for checking the dimensions of parts during the machining process on machine tools. The authors investigated contact method using radioactive isotopes and noncontact methods, using radiation only, for controlling the dimensions of parts. The contact method has certain disadvantages, since here

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in the Automobile and Tractor Industries

parts are exposed to wear, although the measuring accuracy is about 1 micron. For this purpose the alpha radiation of thorium is used. The noncontact radiation method involves the application of a small X-ray source, for example, the medical X-ray device RU-760, or a container with a radioactive isotope producing a "soft" radiation (Thulium-170, Europium-155). With the radiation method, a narrow beam of gamma rays is directed tangentially to the surface of the part to be checked. Compared to photoelectric or optical methods, the radiation method has the advantage of being independent of the influences of grease and oil on the surface of the parts to be measured. The authors calculated that the application of this method would increase the productivity of a machine tool by 25-30% resulting in an annual saving of 10,000-14,000 rubles. N.I. Leshchinskiy, Ye.A. Spitsin and A.S. Shtan' considered in their

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in the Automobile and Tractor Industries

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report "Principal and Technological Solutions for  
Planning Laboratories for the Investigation of the  
Wear of Machine Parts" various problems of precau-  
tion measures for work with radioactive materials.  
The reports of A.Kh. Eliava and V.V. Volkovitskaya  
dealt also with safety measures. The conference  
participants agreed that a number of investigation  
methods using radioactive isotopes must be developed  
in the future. It is planned to convene another con-  
ference on the application of radioactive isotopes  
in the automobile industry in 1960.

ASSOCIATION: NAMI

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8/273/63/000/001/004/013  
A052/A126

**AUTHORS:** Ramayya, K.S., Zavel'skiy, V.S.

**TITLE:** Effect of additions to oil on the corrosion wear of bearing alloys

**PERIODICAL:** Referativnyy zhurnal, otdel'nyy vypusk, 39. Dvigateli vnutrennego  
sgoraniya, no. 1, 1963, 14, abstract 1.39.83 (In collection: Pri-  
sadki k maslam i toplivam, M., Gostoptekhizdat, 1961, 283 - 290)

**TEXT:** The results are reported of an investigation into the effect of ad-  
ditions to oil on the corrosion wear of COC6-6 (SOS6-6) alloy. The additions  
ЦИАТИМ-330 (TsIATIM-330) (naks), ЦИАТИМ-339 (TsIATIM-339) and ДФ-1 (DF-1)  
were investigated. The corrosion of lead was investigated on a ДК-2 (DK-2) de-  
vice and the corrosion wear on an ИПС-НАМИ (IPS-NAMI) installation. There  
are 7 figures and 8 references. See also RZhMash, 1962, 42.6.371. ✓

[Abstracter's note: Complete translation]

Card 1/1

ZAVEL'SKIY, V. S.

PA 187T79

USSR/Physics - Thermal Conductivity Mar/Apr 51  
Measurements

"Thermal Bridge," V. S. Zavel'skiy, F. S.  
Zavel'skiy

"Avtomat 1 Telemekh" Vol XII, No 2, pp 172, 173

Describe apparatus using bridge circuit for rela-  
tive measurements of the coeff of thermal cond  
of materials. Submitted 12 Aug 50.

187T79 ✓

VYSOTSKIY, D.V., kandidat tekhnicheskikh nauk; ZAVEL'SKIY, V.S.

Determining the wear of parts by means of radioactive isotopes. Avt.trakt.  
prom. no.9:11-14 S '53. (MLRA 6:9)

1. Nauchnyy avtomotorny institut.

(Isotopes--Industrial application)

KOTOK, M.B.; ZAVEL'SKIY, Z.I., redaktor; VAYNSHTEYN, Ye.B., tekhnicheskiy redaktor

[Measuring labor productivity in ferrous metallurgy] Izmerenie  
proizvoditel'nosti truda v chernoi metallurgii. Khar'kov. Gos.  
nauchno-tekhn.isd-vo lit-ry po chernoi i tsvetnoi metallurgii.  
1952. 94 p. [Microfilm] (MLRA 8:12)  
(Labor productivity)

AUTHORS: Zavenyagin, Yu.A., Fedorov, N.D.

89-7-11/32

TITLE: On the Problem of the Selection of the Amount of the Potential Difference Between the Duants of a Cyclotron (K voprosu o vybore velichiny raznosti potentsialov mezhdu duantami tsiklotrona)

PERIODICAL: Atomnaya Energiya, 1957, Vol. 3, Nr 7, pp. 50-52 (USSR)

ABSTRACT: First, attention is drawn to some previous works dealing with this subject. In the present paper the dependence of the magnetic field upon the radius in the most general form was chosen. The necessary direction was determined for the simultaneous acceleration of ions, the initial phases of which are contained in a certain assumed range of values. A formula is given for the dependence of magnetic field strength on the relative radius  $x$ . A process in which the moved ion is located during most of the time within the duants (outside of the electric field), is here described as a "lenticular" acceleration process. All expressions given here apply to the first half circulation of the ion. The integration of the equation for the phase modification is discussed. A formula is given explicitly for the amount of the potential difference between the duants. A solution in an explicit form exists, however, only in the case

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On the Problem of the Selection of the Amount of  
the Potential Difference Between the Duants of a  
Cyclotron

89-7-11/32

of a quadratic law for the modification of the magnetic field. In all other cases an approximation method has to be applied. The potential difference is minimal in the case in which the maximum possible interval for the acceleration of the ions for the modification of the phases is selected. In conclusion the results are given for some concrete computations for simple formulae of the decrease of the magnetic field and for various phase conditions. In a diagram a comparison is drawn between the potential differences  $2v_0$  for various forms of the decrease of the magnetic field ( $k = 0.5$ ;  $k = 1$ ,  $k = 2$ ). The values for  $2v_0$  at  $k = 3$  are larger only by 2% than at  $k = 2$ . There are 3 figures and 6 references, 3 of which are Slavic.

SUBMITTED: October 13, 1956

AVAILABLE: Library of Congress

1. Cyclotrons - Operation - Mathematical analysis

Card 2/2

ZAVENYAGIN, Yu.A.; MESHCHEROV, R.A.; MIRONOV, Ye.S.

Some aspects of the theory of a cyclotron with an azimuthally  
varying magnetic field. Atom. energ. 11 no.1:26-33 J1 '61.

(MIRA 14:7)

(Cyclotron) (Magnetic fields)

21(9)

AUTHORS:

Budyanskiy, G. M., Zavenyagin, Yu. A., Fedorov, N. D.,  
Khrabrov, V. A. SOV/89-6-3-8/29

TITLE:

On the Possibility of Accelerating Polarized Protons in a  
Cyclotron (O vozmozhnosti uskoreniya polyarizovannykh protonov  
v tsiklotrone)

PERIODICAL:

Atomnaya energiya, 1959, Vol 6, Nr 3, pp 306 - 310 (USSR)

ABSTRACT:

In connection with the construction of an ion source for polarized ions (Ref 1) the problem arises whether it is possible to accelerate these polarized ions in a cyclotron and to let them escape from it. If an acceleration would be feasible, a primary straying could be eliminated and a particle beam with a sufficient high intensity could be produced provided that an sufficiently strong ion source has been chosen. The probability of spin orientation inversion during the acceleration of polarized protons in a cyclotron is estimated theoretically. The magnetic field of the cyclotron decreases with growing radius and besides exhibits an azimuthal inhomogeneity. The probability for the polarization of accelerated protons when the beam escapes from the cyclotron chamber is also estimated

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. On the Possibility of Accelerating Polarized Protons  
in a Cyclotron

SOV/89-6-3-8/29

theoretically. In both cases it is shown that the probability  
of depolarization is very small. This work has already been  
carried out in 1956. There are 1 figure and 2 Soviet references.

SUBMITTED: September 20, 1958

Card 2/2

POPENZHKOVA, Z.A.; ZAVENYAGINA, T.N. (Moskva)

Effect of pyrogenal on the serotonin and histamine content  
in the blood. Pat. fiziol. i eksp. terap. 6 no.6:68-69 N-D'62  
(MIRA 17:3)

1. Iz otdela infektsionnoy patologii i eksperimental'noy tera-  
pii infektsiy ( zav. - chlen -korrespondent AMN SSSR prof.  
Kh.Kh. Flanel'yes) Instituta epidemiologii i mikrobiologii  
imeni akademika N.F. Gamalet. AMN SSSR.

POPENENKOVA, Z.A.; ZAVENYAGINA, T.N.

Effect of serotonin (5-hydroxytryptamine) and 5-hydroxytryptophan on the mortality of animals in experimental pneumococcal infection and typhoid intoxication. Biul.eksp.biol.i med. 53 no.6:48-51 Je '62. (MIRA 15:10)

1. Iz otdela infektsionnoy patologii i eksperimental'noy terapii infektsiy (zav. - chlen-korrespondent AMN SSSR prof. Kh.Kh. Planel'yes) Instituta epidemiologii i mikrobiologii imeni N.F. Gamalei (dir. - chlen-korrespondent AMN SSSR prof. O.V.Baroyan) AMN SSSR, Moskva. Predstavlena deystvitel'nyy chlenom AMN SSSR L.A.Zil'berom.  
(SEROTONIN) (TRYPTOPHAN) (PNEUMOCOCCAL INFECTIONS)  
(TYPHOID FEVER)

POPENENKOVA, Z.A.; ZAVENYAGINA, T.N.

Change in the serotonin content in the blood and organs of rats  
in experimental pneumococcal infection. Biul. eksp. biol. i med.  
52 no.11:43-46 N '61. (MIRA 15:3)

1. Iz otdela infektsionnoy patologii i eksperimental'noy  
terapii infektsii (zav. - chlen-korrespondent AMN SSSR prof.  
Kh.Kh. Planol'yes) Instituta epidemiologii i mikrobiologii imeni  
N.F. Gamalei (dir. - prof. S.N. Muromtsev) AMN SSSR, Moskva.  
Predstavlena doystvitel'nym chlenom AMN SSSR D.A. Zil'berom.  
(SEROTONIN)  
(PNEUMOCOCCAL INFECTIONS)